



INSPECTION REPORT: KENSINGTON GOLD MINE

Tongass National Forest Minerals Group
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Date of Inspection: Wednesday January 31, 2018
Date of Report: Thursday February 8, 2018
USDA Forest Service Inspector: Richard Dudek

Ranger District: Juneau Ranger District
Weather Conditions: Sunny with some clouds. Temperature: 5 °F.

Exploration in accordance with operating plan	Not Applicable
Timber removal following timber sale contract	Not Applicable
BMPs for erosion control	Satisfactory
Water Quality BMPs	Satisfactory
Public safety & fire prevention	Satisfactory
Reclamation work adequate and timely	Satisfactory
Roads maintenance adequate and current	Satisfactory
Tails placement in accordance with plan	Satisfactory
Waste Rock placement in compliance	Satisfactory
Company supervision of operation	Satisfactory
Operating in a clean and orderly manner	Satisfactory

Any conditions noted as UNSATISFACTORY will require follow up action by the Mine Inspector and a written memorandum to the operator, outlining the necessary work.

NEW REMARKS

Ward Air provided transportation (Cessna 206) to site and Coeur Alaska provided the crew ferry from site.

Peter Strow (Sr. Environmental coordinator, Coeur Alaska) accompanied Curtis Caton (Geologist, United States Forest Service (USFS)), Edward Gazzetti (Hydrogeologist, USFS), and Richard Dudek (Geologist, USFS).

This inspection included the Access roads, Comet Development Pile, Comet water treatment plant, Sherman Creek Outfall, Comet beach, Kensington mill area, the fuel depot, and the TTF area.

ACTION ITEMS:

- **Snow and ice buildup in the fuel tank farm.**

NOTEWORTHY ITEMS:

Current advancement for the Jualin adit is 4,988.45 feet.

ACCESS ROADS

The access roads were in adequate condition. Coeur Alaska personnel are removing snow from the access roads and placing gravel down for traction (2016 BMP Plan; page C-53).





COMET DEVELOPMENT PILE

This site is currently inactive (Photo 1).

COMET WATER TREATMENT PLANT (CWTP)

On 1/31/2018, the CWTP was treating 1,400 gallons of water per minute (gpm). Pond-1 (Photo 2) was receiving mine site water, and Pond-2 (Photo 3) was receiving backwash from the CWTP. Since Coeur Alaska installed multiple silt curtains in Pond -1, the majority of sediments have accumulated to a small section in the pond. This spring, Coeur Alaska will dredge both ponds to remove sediment buildup. The dredging process will take two to three weeks for each pond. Good housekeeping practices (2016 BMP plan Table 4-1) were observed inside the CWTP.

White material was observed on the test rock used for monitoring white material in treated mine site water (Photo 4). Personnel at the water treatment plant first observed and recorded traces of white material on 1/22/2018. Coeur Alaska is bench testing different flocculants and coagulants to help precipitate white material out of solution. The water treatment plant personnel are currently conducting a one-month trial test using calcium chloride (CaCl_2) (Photo 5) to precipitate white material out of solution.

SHERMAN CREEK OUTFALL

White material was observed in Sherman Creek. Several rocks in the creek bed appear to have a white filmy coating (Photos 6-8).

COMET BEACH

The rock core from the 2017 geotechnical drilling is currently staged at this location is on a patented claim (Photo 9).

KENSINGTON MILL AREA

All waste rock generated from the underground workings is currently being deposited at the Kensington development pile (Photo 10).

Contractors continue with the construction of the new powerhouse station (Photos 11-12). Coeur Alaska plans to bring the four new 4-megawatt generators online this spring to provide power to the mine site.

FUEL DEPOT

The fuel tank's structural gravel pad was covered in snow and ice (Photo 13). The 2014 fuel depot handbook pages 4-6 state that daily/monthly inspections take place, which include the fuel tank's secondary containment. The fuel tank farm's structural gravel pad is considered secondary containment. With snow and ice covering the pad, the total volume capacity for secondary containment has been reduced. In the event of a major fuel spill, the tank farms secondary containment may not be adequate to hold 110% of the volume. Snow and ice accumulation should be monitored, and removed if it is impacting the capacity to store 110% of the volume of a single tank.

The refueling pad did not show any indications of fuel spills during refueling of the fuel truck (Photo 14).

TAILINGS TREATMENT FACILITY (TTF) AREA

The TTF was mostly frozen over and the recorded water level on 1/31/2018 was 703.65 feet (Photo 15-16). The stage 2 dam design is permitted for a maximum water elevation of 697.3 feet, which is based on the 200-year storm surge. The current water elevation does not comply with the maximum water





elevation stated in Coeur Alaska's Plan of Operations (POO). Coeur Alaska personnel are aware of this and are working on keeping the water levels from steadily increasing prior to the stage 3 dam elevation raise.

On 1/31/2018, the water treatment plant was discharging 1,410 gpm. To help treat total dissolved solids (TDS) and sulfate (SO_4). The TTF water treatment plant personnel have been diluting the water with fresh water from the Upper Slate Lake diversion in order to meet the APDES permit limits. Which this process is causing a reduction in the net treatment rates, and causing water levels in the TTF to rise.

Good housekeeping practices (BMP plan Table 4-1) were observed inside the water treatment plant.

In the northern TTF, the acid rock drainage (ARD) collection ditch was frozen over and covered in snow (Photo 17). Waste rock was added to the collection ditch berms height in December of 2017 to prevent inundation from rising water levels in the TTF.

FOLLOW UP ITEMS

- Inspect the Comet water treatment plant.
- Inspect for white material in Sherman Creek.
- Observe construction of the powerhouse facility.
- Inspect the TTF area.
- Inspect the Fuel depot.

PHOTOS (Additional photos available upon request)





Photo 1. The Comet development pile.



Photo 2. The Comet water treatment plant, pond-1.



Photo 3. The Comet water treatment plant, pond-2.



Photo 4. White filmy material coating the test rocks.



Photo 5. A 300-gallon tote of Calcium Chloride (CaCl).



Photo 6. Sherman Creek (outfall 001).



Photo 7. Sherman Creek.



Photo 8. Sherman Creek.



Photo 9. Comet beach area.



Photo 10. The Kensington development pile.



Photo 11. The powerhouse station.



Photo 12. Staged inside the new powerhouse are the 4 four-megawatt generators.



Photo 13. The Coeur Alaska fuel depot.



Photo 14. The fuel depot's refueling pad.



Photo 15. The tailings treatment facility (TTF).



Photo 16. Southern TTF and the TTF dam.



Photo 17. The northern TTF area.

Thanks to Kensington Mine for a safe visit.
U.S. Forest Service Officer: /s/ Richard Dudek
